IN THE CLAIMS

     This listing of claims will replace all prior versions, and listings, of claims in

the application. An identifier indicating the status of each claim is provided.

Listing of Claims

     1.-6 (Cancelled)

     7. (Currently Amended)   ~~The information signal processing apparatus according~~

~~to claim 6,~~ An information signal processing apparatus for converting a first information signal

containing multiple items of first informational data into a second information signal containing

multiple items of second informational data, comprising:

     a first processing portion for selecting multiple items of the first informational

data positioned in a periphery of a target position in said second information signal based on said

first information signal and, based on said multiple items of the first informational data thus

selected, detecting a class to which the second informational data of said target position in said

second information signal belongs; and

     a second processing portion for selecting multiple items of the first informational

data positioned in a periphery of the target position in said second information signal based on

said first information signal and generating second informational data of the target position in

said second information signal by performing an operation using said multiple items of the first

informational data thus selected and coefficient data that corresponds to the class detected by said

first processing portion,

     wherein said first processing portion and said second processing portion are

respectively constituted of integrated circuits each having the same configuration,

wherein each of said integrated circuits comprises:

a first functional block for selecting multiple items of the first informational data positioned in a periphery of the target position based on the received first information signal; and

a second functional block for performing processing using said multiple items of the first informational data thus selected, wherein each of said first functional block and said second functional block changes a functionality thereof according to setting.

8. (Currently Amended) ~~The information signal processing apparatus according to claim 6,~~ An information signal processing apparatus for converting a first information signal containing multiple items of first informational data into a second information signal containing multiple items of second informational data, comprising:

a first processing portion for selecting multiple items of the first informational data positioned in a periphery of a target position in said second information signal based on said first information signal and, based on said multiple items of the first informational data thus selected, detecting a class to which the second informational data of said target position in said second information signal belongs; and

a second processing portion for selecting multiple items of the first informational data positioned in a periphery of the target position in said second information signal based on said first information signal and generating second informational data of the target position in said second information signal by performing an operation using said multiple items of the first informational data thus selected and coefficient data that corresponds to the class detected by said

first processing portion,

wherein said first processing portion and said second processing portion are

respectively constituted of integrated circuits each having the same configuration

wherein said information signal is an image signal; and

wherein said first processing portion comprises:

a first class-detection processing section for selecting multiple items of the

first informational data positioned in a periphery of the target position in said second information

signal based on said first information signal and detecting an inter-frame difference based on said

multiple items of the first informational data thus selected to detect a motion class that

corresponds to said inter-frame difference thus detected; and

a second class-detection processing section for selecting multiple items of

the first informational data positioned in a periphery of the target position in said second

information signal based on said first information signal and detecting a level distribution based

on said multiple items of the first informational data thus selected to detect a space class that

corresponds to said level distribution thus detected, and wherein said first class-detection

processing section and said second class-detection processing section are respectively constituted

of integrated circuits each having the same configuration.

9. (Original)   An information signal processing apparatus for converting a first

information signal containing multiple items of first informational data into a second information

signal containing multiple items of second informational data, comprising:

a first processing portion for performing filter processing on said first information

signal to obtain a third information signal,

wherein said first processing portion selects multiple items of the first informational data positioned in a periphery of a target position in said third information signal based on said first information signal, and performs an operation using said multiple items of the first informational data thus selected and coefficient data to generate items of third informational data of said target position in said third information signal;

a second processing portion for selecting multiple items of the third informational data positioned in a periphery of a target position in said second information signal based on said third information signal obtained at said first processing portion and, based on the multiple items of the third informational data thus selected, detecting a class to which the second informational data of said target position in said second information signal belongs; and

a third processing portion for selecting multiple items of the first informational data positioned in a periphery of the target position in said second information signal based on said first information signal and performing an operation using said multiple items of the first informational data thus selected and coefficient data that corresponds to the class detected at said second processing portion, to generate said second informational data of said target position in said second information signal,

wherein said first processing portion, said second processing portion, and said third processing portion are respectively constituted of integrated circuits each having the same configuration.

10. (Original) The information signal processing apparatus according to claim 9, wherein each of said integrated circuits comprises:

a first functional block for selecting multiple items of the first

informational data positioned in a periphery of the target position based on the received first information signal; and

a second functional block for performing processing using said multiple items of the first informational data thus selected, wherein each of said first functional block and said second functional block changes a functionality thereof according to setting.

11. (Original)　The information signal processing apparatus according to claim 9, wherein said information signal is an image signal;

wherein said first processing portion comprises:

a first band-limit processing section for outputting a first band-limited signal as said third information signal; and

a second band-limit processing section for outputting a second band-limited signal as said third information signal, in which:

said first band-limit processing section selects, based on said first information signal, multiple items of the first informational data positioned in a periphery of a target position in said first band-limited signal and performs a multiply-and-accumulation operation using said multiple items of the first informational data thus selected and coefficient data for adding a low-pass filter property to generate items of third informational data of said target position in said first band-limited signal; and

said second band-limit processing section selects, based on said first information signal, multiple items of the first informational data positioned in a periphery of a target position in said second band-limited signal and performs a multiply-and-accumulation operation using said multiple items of the first informational data thus selected and coefficient

data for adding a band-pass filter property to generate items of fourth informational data of said

target position in said second band-limited signal; and

   wherein said second processing portion comprises:

     a first class-detection processing section for selecting, based on said first

band-limited signal, the multiple items of the third informational data positioned in a periphery

of the target position in said second information signal and detecting an inter-frame difference

based on the multiple items of the third informational data thus selected to detect a motion class

that corresponds to this detected inter-frame difference; and

     a second class-detection processing section for selecting the multiple items

of the fourth informational data positioned in a periphery of the target position in said second

information signal based on said second band-limited signal and detecting a level distribution

based on said multiple items of the fourth informational data thus selected to detect a space class

that corresponds to this detected level distribution; and wherein said first band-limit processing

section, said second band-limit processing section, said first class-detection processing section,

and said second class-detection processing section are respectively constituted of integrated

circuits each having the same configuration.

   12. (Original) An information signal processing apparatus for converting a first

information signal containing multiple items of first informational data into a second information

signal containing multiple items of second informational data, comprising:

   a first processing portion for performing noise reduction processing on said first

information signal to obtain a third information signal,

   wherein said first processing portion selects, based on said first information

signal, multiple items of the first informational data positioned in a periphery of a target position in said third information signal and performs a multiply-and-accumulation operation using said multiple items of the first informational data thus selected and coefficient data to generate third informational data of said target position in said third information signal;

a subtracter for subtracting items of the third informational data that constitute said third information signal generated at said first processing portion from items of the first informational data that constitute said first information signal, to obtain items of noise data that respectively correspond to said items of the first informational data that constitute said first information signal;

a second processing portion for selecting multiple items of noise data positioned in a periphery of a target position in said second information signal based on said noise data obtained at said subtracter and, based on said multiple items of the noise data thus selected, detecting a class to which the second informational data of said target position in said second information signal belongs; and

a third processing portion for selecting multiple items of the first informational data positioned in a periphery of the target position in said second information signal based on said first information signal and performing a multiply-and-accumulation operation using said multiple items of the first informational data thus selected and coefficient data that corresponds to the class detected at said second processing portion, to generate the second informational data of said target position in said second information signal,

wherein said first processing portion, said second processing portion, and third processing portion are respectively constituted of integrated circuits each having the same configuration.

13. (Original)   The information signal processing apparatus according to claim 12,

wherein said integrated circuit comprises:

a first functional block for selecting multiple items of the first informational data positioned in a periphery of the target position based on the received first information signal; and

a second functional block for performing processing using said multiple items of the first informational data thus selected, wherein each of said first functional block and said second functional block changes a functionality thereof according to setting.

14. (Original)   An information signal processing apparatus for converting a first information signal containing multiple signal components into a second information signal containing multiple signal components, comprising:

multiple processing portions each for selecting multiple items of the first informational data positioned in a periphery of a target position in said second information signal based on each of said multiple signal components of said first information signal and detecting classes to which the items of the second informational data of said target position in said second information signal belong based on said multiple items of the first informational data thus selected;

a class synthesis portion for synthesizing said classes detected at said multiple processing portions to generate one class;

a data selection portion for selecting said multiple items of the first informational

data positioned in a periphery of the target position in said second information signal based on

said multiple signal components of said first information signal; and

      multiple arithmetic operation portions each for performing an operation using said

multiple items of the first informational data selected at said data selection portion and different

items of coefficient data corresponding to said class generated at said class synthesis portion, to

generate the second informational data of the target position in said multiple signal components

of said second information signal,

      wherein said multiple processing portions are respectively constituted of

integrated circuits each having said same configuration.